

REMARKS

Claims 1, 3, 9, 10, 12-14 and 19-26 are presented for further examination. Claims 1, 3, 9, 13 and 14 are amended, and claims 2, 4-8, 11 and 15-18 are canceled. Claims 10, 12, 19-26 are the original claims, and claims 27-35 are previously withdrawn. In the above claim listing we have included original claims for convenience of the examination.

Regarding basis of the current amendment, the applicant has incorporated the features of claim 5 into claims 1, 3, 9 and 13 with necessary modifications to prevent lack of antecedent basis. Claim 14 is amended to depend from claim 12. Thus, the present amendment is not introducing new matter.

The Outstanding Office Action

In the Office Action dated August 18, 2006, the Examiner rejected claims 3, 5, 7, 13, 15, 17, 21, 23 and 25 under 35 U.S.C. §102(b) as being fully anticipated by Takeuchi (JP 09-231569), and claims 3, 7, 13 and 17 as being fully anticipated by Mizuta (JP05-290412) or by Morimoto (JP 01-286144). In addition, the Examiner rejected claims 3, 7, 13 and 17 as being patentable over Miyake *et al* (JP 10-334468) in view of Furumiya *et al* (US 5,490,126), and claims 1-26 under 35 U.S.C. §103(a) as being unpatentable over Takeuchi in view of either Oyake (US 2002/0160312) or Oyake (WO 02/069336). Please be advised that although the Examiner referred in the Detailed Action, page 3, line 1, the rejected claims as “[c]laims 3, 5, 7, 13, 15, 17, 21, 23 and 25”, we understand that the rejected claims should be claims 3, 5, 7, 13, 15, 17, 21, 23 and 25. In response to these rejections, the applicant hereby amends claims as listed above, and respectfully traverses some of the rejections.

The Claims are Patentable

§102(b) rejection based on Takeuchi (JP 09-231569)

The Examiner stated in the Office Action that the formation of prepits using laser pulses is illustrated in figure 1 of Takeuchi (JP 09-231569), where the 3 and 4T pulses are formed with a duty cycle of 100% and 5 and 14 T pulses each have a lower duty cycle across the pulse, with the duty cycle of the 5T pulse only having one off cycle and the 14 T pulse having 3, so the duty cycle for the 14T pulse is the lowest. It is true that Takeuchi teaches to vary a duty

ratio of the pulse-like laser beam in accordance with a length of a depressed portion or a projecting portion of the raised and depressed pattern to be formed.

However, what Takeuchi discloses is quite different from the previous claim 5. From the Examiner's understanding of Takeuchi, it teaches in figure 1 that when the length of a depressed portion or a projecting portion of the raised and depressed pattern is equal to or shorter than 4T, the duty ratio of the pulse-like laser beam is kept constant independently of the length of a depressed portion or a projecting portion of the raised and depressed pattern to be formed, and that when the length of the depressed portion or the projecting portion of the raised and depressed pattern is equal to or longer than 5T, the duty ratio of the pulse-like laser beam is varied in accordance with a length of a depressed portion or a projecting portion of the raised and depressed pattern.

Contrary to Takeuchi, the previous claim 5 of the present application recites "when a length of a depressed portion or a projecting portion of the raised and depressed pattern is shorter than a predetermined length, a duty ratio of the pulse-like laser beam is varied in accordance with the length of the depressed portion or the projecting portion of the raised and depressed pattern and when a length of the depressed portion or a projecting portion of the raised and depressed pattern is equal to or longer than a predetermined length, the duty ratio of the pulse-like laser beam is kept constant independently of the length of the depressed portion or the projecting portion of the raised and depressed pattern, thereby exposing the photosensitive material layer to the laser beam." Thus, the previous claim 5 is not disclosed or suggested by Takeuchi. Rather, Takeuchi teaches against the previous claim 5.

Since the features of the previous claim 5 are included into claims 3 and 13 in the current amendment, and claim 23 recites almost identical features of the previous claim 5, Takeuchi neither discloses nor suggests claims 3 and 23 as well as claims depending therefrom.

Further, Takeuchi does not disclose or suggest the feature of pending claim 21 in which two or more pulses of a laser beam is projected onto the photosensitive material layer, because Takeuchi discloses that a single pulse of the laser beam is projected in the case of forming preprints having a length of 3T and 4T. Takeuchi also does not disclose or suggest claims 23 and 25, which depend from claim 21.

As stated above, we believe that pending claims 3, 13, 21, 23 and 25 are allowable.

§102(b) rejections based on Mizuta (JP 05-290412) or Morimoto (JP 01-286144);  
103(a) rejections based on Miyake (JP 10-334468) in view of Furumiya et al (US 5,490,126)

The Examiner rejected claims 3, 7, 13 and 17 as being fully anticipated by Mizuta (JP05-290412) or by Morimoto (JP 01-286144). In addition, the Examiner rejected claims 3, 7, 13 and 17 as being patentable over Miyake (JP 10-334468) in view of Furumiya et al (US 5,490,126).

In response, the applicant has canceled claims 7 and 17. As for claims 3 and 13, the applicant has amended these claims to include features of the previous claim 5 to which these rejections are not raised. We believe that pending claims 3 and 13 are allowable.

§103(a) rejection based on Takeuchi and Oyake (US 2002/0160312) or Oyake (WO 02/069336)

The Examiner rejected claims 1-26 as being unpatentable over Takeuchi in view of either Oyake (US 2002/0160312, hereinafter, "Oyake'312") or Oyake (WO 02/069336, hereinafter "Oyake WO'336"). However, since Oyake'312 does not designate US in the international stage, it does not qualify as a prior art reference under 35 U.S.C. §102 (e)(1). Accordingly we understand that Oyake WO'336 cited in the outstanding Office Action should read as Oyake '312.

The Examiner pointed out in the outstanding action that Oyake WO'336 discloses in Example 1 that on a polished glass substrate was formed a layer of a coupling agent and a coating containing a light absorber was spin-coated on the coupling agent layer and 4, 4'-bis (dimethylamino) benzophenone which is referred to as one of illustrative example of a photo-initiation auxiliary agent in the specification of the captioned application was used as the light absorber in Example 1 of Oyake WO'336.

In response, the applicant has canceled claims 2, 6, 8, 11, 16 and 18, and has amended claims 1 and 9 to include features of the previous claim 5. As stated above in connection with §102 rejection by Takeuchi, the features of previous claim 5 are not disclosed or suggested by Takeuchi. Oyake '312 also fails to disclose or to suggest the features of the

previous claim 5. Therefore, claims 1, 3, 9, 13, as well as claims depending therefrom are not disclosed or suggested by Takeuchi in view of Oyake '312.

In addition, claims 10, 19 and 21 recite two or more pulses of a laser beam which is projected onto the photosensitive material layer. Takeuchi and Oyake '312 fail to disclose this feature too. As stated above with respect to §102 rejection against claim 21 based on Takeuchi, claims 10, 19 and 21 as well as claims depending therefrom are not disclosed or suggested. Thus, current pending claims 1, 3, 9, 10, 12-14 and 19-26 are allowable.

§103(a) rejection based on Takeuchi and Mizuta (JP 04-263140) or Sato *et al* (US 5,939,510)

The Examiner rejected claims 1-26 as being unpatentable over Takeuchi in view of either Mizuta (JP 04-263140, hereinafter, "Mizuta'140") or Sato *et al* (US 5,939,510).

As stated above in the response to the §103 rejection over Takeuchi in view of Oyake, the applicant has canceled claims 2, 6, 8, 11, 16 and 18, and has amended claims 1 and 9 to include features of the previous claim 5. Mizuta'140 and Sato fail to disclose or suggest the features of the previous claim 5. Therefore, claims 1, 3, 9, 13, as well as claims depending therefrom are not disclosed or suggested by Takeuchi in view of either Mizuta'140 or Sato. Regarding claims 10, 19 and 21, the feature of two or more pulses of a laser beam is not disclosed in Mizuta'140 or Sato, thus, claims 10, 19 and 21 as well as claims depending therefrom are not disclosed or suggested. Therefore, current pending claims 1, 3, 9, 10, 12-14 and 19-26 are allowable.

Obviousness-type Double Patenting Rejection

With respect to the previous claims 1-26, the Examiner raised provisional rejections for obviousness-type double patenting over claims 1-25 of copending Application No. 10/495746 (US 2005/0006336), claims 1-6 and 13-16 of copending Application No. 10/493301 (US 2004/0259039), claim 1 of copending Application No. 10/500719 (US 2005/0042417), claims 1-2 of copending Application No. 10/500008 (US 2005/0066825), claims 1-2 of copending Application No. 10/500893 (US 2005/0118534), and claims 16-20 of copending Application No. 10/515404 (US 2005/0232130). Each of these rejections was raised in view of Takeuchi JP 09-231569.

The cited claims of the copending applications are generally directed to method to manufacturing optical discs using a stamper. However, in light of our argument presented above in regard to §102 and §103 rejections based on Takeuchi, we believe that each of the pending claims is patentably distinct from the cited claims in the copending applications. Specifically, Takeuchi neither discloses nor suggests the features of the previous claim 5. The cited claims of the copending applications also do not recite these features.

Therefore, we respectfully ask the Examiner to conduct a further review regarding the double patenting rejections. At this stage, we refrain from submitting the terminal disclaimer to copending applications, including the present application. This can be done at a later date against any applications the Examiner still deems it necessary in light of this response. It is to be noted that Application No. 10/515,404 (US 2005/0232130) has an effective filing date, May 3, 2003, which is later than that of the present application, September 10, 2004.

**Conclusion**

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

As stated above, all of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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